IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:   09/736,908   Conf. No.:   8381

Inventor: Kaushal Kurapati

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Examiner: Jason Salce

Title: Method and Apparatus for Generating Recommendations Based on Consistency of Selection

Docket No.:   US000387 (PHB-10-6456)

Customer No.: 24737

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

March 24, 2008

APPEAL BRIEF

Dear Sir:

    Attached herewith is Appeal Brief, pursuant to 35 U.S.C. §134 and 37 C.F.R. §41.37, in support of a Notice of Appeal filed January 30, 2008

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I.   REAL PARTY IN INTEREST

The real party in interest in the above-entitled application is Koninklijke Philips Electronics N.V., Eindhoven, NL.

II.   RELATED APPEALS AND INTERFERENCES

The undersigned attorney/agent, the appellants, and the assignee are not aware of any related appeals or interferences that would directly affect, or be directly affected by, or have a bearing on the Board's decision in this pending appeal.

III.   STATUS OF THE CLAIMS

Claims 1-22 are rejected. Claims 1-22 are on appeal.

IV.   STATUS OF AMENDMENTS

No after final amendments have been submitted.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent **claim 1** is directed towards a method for recommending items using a recommending device. (See page 4, lines 6-7; page 8, lines 8-10). The method includes obtaining a list of one or more available items. (See page 8, lines 10-12). The method further includes obtaining a recommendation score, R, for said one or more available items. (See page 8, lines 12-16). The method further includes calculating, using a processor of the recommending device, an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered, wherein the number of times the item was offered is greater than one, and wherein the number of times the item was offered and the number of times the item was selected by the user are stored in a memory. (See page 8, lines 17-19; page 9, lines 14-23). The method further includes generating, using said processor, a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A. (See page 9, lines 26-30). The method further includes displaying said list on a display unit, wherein said items are displayed in order based on a value of said combined recommendation score, C. (See page 9, line 31 to page 10, line 2).

Claim 3, which depends from claim 1, recites that the recommendation score, R, is provided by an explicit program recommender. (See page 7, lines 4-8).

Independent **claim 8** is directed towards a method for recommending items. (See page 8, lines 8-10). The method includes obtaining a list of one or more available items. (See page 8, lines 10-12). The method further includes calculating, using a processor, a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered, wherein the number of times the item was offered is greater than one, and wherein the number of times the item was offered and the number of times the item was selected by the user are stored in a memory. (See page 8, lines 17-19; page 9, lines 14-23). The further includes displaying said list on a display unit, wherein said items are displayed in order based on a value of said recommendation score. (See page 9, line 31 to page 10, line 2).

Independent **claim 11** is directed towards a system for recommending items. (See page 4, lines 6-7; page 5, lines 18-19). The system includes a memory for storing computer readable code. (See page 5, line 21). The system further includes a processor operatively coupled to said memory. (See page 5, lines 18-21). The processor is configured to obtain a list of one or more available items. (See page 4, lines 7-10; page 8, lines 10-12). The processor is further configured to obtain a recommendation score, R, for said one or more available items. (See page 4, lines 14-19; page 8, lines 17-19; page 9, lines 14-23). The processor is further configured to calculate an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one. (See page 4, lines 19-32; page 8, lines 17-19; page 9, lines 14-23). The processor is further configured to generate a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A. (See page 9, lines 26-30). The processor is further configured to control a displaying of said list, wherein said items are displayed in order based on a value of said combined recommendation score, C. (See page 9, line 31 to page 10, line 2).

Claim 13, which depends from claim 11, recites that the recommendation score, R, is provided by an explicit program recommender. (See page 7, lines 4-8).

Independent **claim 18** is directed towards a system for recommending items. (See page 4, lines 6-7; page 5, lines 18-19). The system includes memory for storing computer readable

code and a processor operatively coupled to said memory. (See page 5, lines 18-21). The processor configure to obtain a list of one or more available items (See page 8, lines 10-12); calculate a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one (See page 8, lines 17-19; page 9, lines 14-23); and control a displaying of the list, wherein said items are displayed in order based on a value of said recommendation score (See page 9, line 31 to page 10, line 2).

Independent **claim 21** is directed towards an article of manufacture for recommending television items. (See page 4, lines 6-7; page 5, lines 18-19). The article of manufacture includes a computer readable medium having computer readable code means embodied thereon. (See page 5, lines 18-21). The computer readable program code means including a step to obtain a list of one or more available items (See page 8, lines 10-12); a step to obtain a recommendation score, R, for said one or more available items (See page 8, lines 12-16); a step to calculate an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one (See page 8, lines 17-19; page 9, lines 14-23); a step to generate a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A (See page 9, lines 26-30); and a step to display said list, wherein said items are displayed in order based on a value of said combined recommendation score, C (See page 9, line 31 to page 10, line 2).

Independent **claim 22** is directed towards an article of manufacture for recommending television items. (See page 4, lines 6-7; page 5, lines 18-19). The article of manufacture includes a computer readable medium having computer readable code means embodied thereon. (See page 5, lines 18-21). The computer readable program code means including a step to obtain a list of one or more available items (See page 8, lines 10-12); a step to calculate a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one (See page 8, lines 17-19; page 9, lines 14-23); and a step to display said list, wherein said items are displayed in order based on a value of said recommendation score (See page 9, line 31 to page 10, line 2).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-2, 4, 7-8, 10-12, 14, 17-18 and 20-22 are unpatentable under 35 U.S.C. §102(e) as being anticipated by Ukai et al. (7,096,486).

Whether claims 3, 5-6, 9, 13, 15-16 and 19 are unpatentable under 35 U.S.C. §103(a) over Ukai et al. in view of Herz et al. (5,758,257).

VII. ARGUMENTS

A. The Rejection of Claims 1-2, 4, 7-8, 10-12, 14, 17-18 and 20-22 under 102(e)

Claims 1, 2, 4, 7, 8, 10-12, 14, 17, 18 and 20-22 stand rejected under 35 U.S.C. §102(e) as being anticipated by Ukai et al. This rejection should be withdrawn because Ukai et al. does not teach each and every aspect set forth in subject claims and, thus, does not anticipate claims 1, 2, 4, 7, 8, 10-12, 14, 17, 18 and 20-22.

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)). MPEP §2131

Ukai et al.

Ukai et al. is directed towards a TV program selection support system that proposes selected programs to the viewer. FIG. 5 shows a view history table 500 showing view scores and view measures, which indicate an extent to which each program was viewed. The view history table 500 includes program name 501, view scores 502 and 503 for the serial numbers of series programs, and program view measure 504, which is the mean view score. The view scores 502 and 503 are calculated by dividing a corresponding view time period by a corresponding program time period, and the program view measure 504 is calculated by dividing the sum of view scores by the number of serials of the series programs. The program view measure 504 is calculated and updated every time the view score 502 or 503 is entered. Hence, Ukai et al. discloses a table that stores historical program viewing information, including, for each program

watched, the ratio of the amount of time a program is watched to the total time length of the program, and the average of the ratios.

Claims 1, 2, 4, and 7

Independent **claim 1** is directed towards a method for recommending items using a recommending device. The method includes, _inter alia_, obtaining a recommendation score for the one or more available items, calculating an adjustment to the recommendation score based on a consistency, which is a ratio of an item being selected by a user relative to the number of times the item was offered, and generating a combined recommendation score based on the recommendation score and the adjustment. The Office asserts that Ukai et al. teaches the above-noted claim aspects. However, Ukai et al. does not teach or suggest these claims aspects.

In the Advisory Action, the Office asserts that the view score of Ukai et al. teaches the claimed recommendation score. More particularly, the Office further asserts that the view scores 502 and 503 represent the amount of time a user enjoyed a program as disclosed at column 5, lines 49-50, and Fig. 5, and that the view scores 502 and 503 are used to recommend programs for recording and future viewing as disclosed at column 4, lines 37-61. Based on the above assertion, the Office concludes that the view score clearly represents the claimed recommendation score. Applicant respectfully traverses the assertions.

First, column 5, lines 49-50, of Ukai et al. does not state anything about enjoyment or enjoying a program. This section of Ukai et al. simply states that a view score is obtained by dividing a view time period by a program time period. Next, column 4, lines 37-61, of Ukai et al. does not even mention the view scores 502 and 503, let alone teach using them to recommend programs for recording and future viewing. More particularly, this section of Ukai et al. relates to an analysis program that creates a preference measure conversion table 700, based on a view element analysis table 600 and a program database 300, and calculates a viewer's preference measure for each program. This section also discloses a schedule decision program 1200 that creates a program recording schedule 1800 based on Table 700. Thus, the information in Table 700 is used to calculate a viewer's preference measure and to schedule programs. However, Table 700 is created based on Table 600 and the database 300, and neither Table 600 nor the database 300 include the view scores 502 and 503. As discussed _infra_, the view scores 502 and 503 for a program are simply a historical viewing record for the program; the view scores 502

and 503 indicate the number of times the program is viewed and, for each time the program is viewed, the ratio of the amount of time the program was viewed to the total time length of the program. Hence, the view scores 502 and 503 clearly do not teach or suggest the claimed recommendation score.

The Advisory Action further asserts that the view measure 504 is an adjustment to the view scores 502 and 503 because when only the first score 502 is in the database, the value of the view measure 504 equals the value of the first view score 502, and when the second view score 503 is added to the database, the value of the view measure 504 does not equal the value of the first view score. From the above, the Office concludes that the first view score 502 has been adjusted by updating/recalculating a view measure 504 with more than one view score. Applicant traverses this assertion.

In contrast, the view scores 502 and 503 are used to calculate the view measure 504, and not vice versa; the value of the first view score 502 is not adjusted when the view measure 504 changes. By way of example, the Office notes that when only the first view score 502 is in the database, the value of the view measure 504 equals the value of the first view score 502. This is because the view measure 504 is the average value of the view scores, and the average of one view score, the first view score 502 in this example, is the value of that view score. In Table 500, the first view score 502 has a value of 1.0. If this were the only view score in the database, then the view measure 504 would have a value of 1.0/1, or 1.0. The Office further notes that adding another view score, for example the view score 503 and/or another view score(s), results in the value of view measure 504 being updated. This is shown in Fig. 5 in that although the first view score 502 is 1.0, there must be at least two other view scores, 503 and another one, since the value of the view measure 504 is 0.6, and the view measure 504 is equal to the average of the view scores.

However, note that the value of the first view score 502 remains 1.0. Thus, regardless of how many view scores are in the database, the first view score 502 is what it is and it is not adjusted or changed. In Fig. 5 of Ukai et al., the first value of the first view measure will be 1.0, regardless of whether there is a third, a fourth, a fifth, … view score in the database. Hence, the view measure 504 is not an adjustment to the view scores 502 and 503. Rather, the view scores are used to determine the view measure 504, and the value of the view measure 504 is adjusted every time another view score is added to Table 5. In addition, the claim requires that the

adjustment be calculated based on a ratio of an item being selected by a user relative to the number of times the item was offered (a consistency). In contrast, the view measure 504 for a program is the average viewing length based on the total length of the program, and not a ratio of an item being selected by a user relative to the number of times the item was offered. Hence, the view measure 504 is not an adjustment to either of the view scores 502 and 503, and the view measure 504 is not calculated based on a consistency, as recited in claim 1.

The Advisory Action references Table 700 of Ukai et al. as teaching generating a combined recommendation score based on the recommendation score and the adjustment. However, Table 700 is created based on Table 600 and database 300, and, as noted above, neither Table 600 nor the database 300 includes the view scores 502 and 503 (which the Office asserts teaches the recommendation score) or the view measure 504 (which the Office asserts teaches the adjustment to the recommendation score). Thus, the Office has failed to support this assertion.

In view of the foregoing, it is readily apparent that Ukai et al. does not teach or suggest each and every aspect as set forth in claim 1. Therefore, the rejection of claim 1 should be reversed.

Claims 2, 4 and 7 depend from independent claim 1 and are allowable at least by virtue of their dependencies. Accordingly, the rejection of claims 2, 4 and 7 should be reversed.

Claims 8 and 10

Independent **claim 8** recites aspects similar to those recited in claim 1. As such, the discussion above regarding claim 1 applies *mutatis mutandis* to claim 8. **Claim 10** depends from claim 8. In light of the above, the rejection of claims 8 and 10 should be reversed.

Claims 11, 12, 14 and 17

Independent **claim 11** recites aspects similar to those recited in claim 1. As such, the discussion above regarding claim 1 applies *mutatis mutandis* to claim 11. **Claims 12, 14 and 17** depend from claim 11. Therefore, the rejection of claims 11, 12, 14 and 17 should be reversed.

Claims 18 and 20

Independent **claim 18** recites aspects similar to those recited in claim 1. As such, the discussion above regarding claim 1 applies *mutatis mutandis* to claim 18. **Claim 20** depends from claim 18. Hence, the rejection of claims 18 and 20 should be reversed.

Claim 21

Independent **claim 21** recites aspects similar to those recited in claim 1. As such, the discussion above regarding claim 1 applies *mutatis mutandis* to claim 21, and this rejection should be reversed.

Claim 22

Independent **claim 22** recites aspects similar to those recited in claim 1. As such, the discussion above regarding claim 1 applies *mutatis mutandis* to claim 22, and this rejection should be reversed.

B.   The Rejection of Claims 3, 5, 6, 9, 13, 15, 16 and 19 under 35 U.S.C. 103(a)

Claims 3, 5, 6, 9, 13, 15, 16 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ukai et al. in view of Herz et al. This rejection should be withdrawn because the combination of Ukai et al. and Herz et al does not teach or suggest all the limitations of the subject claims and, therefore, fails to establish a *prima facie* case of obvious with respect to the subject claims.

> To establish *prima facie* obviousness of a claimed invention, all
> the claim limitations must be taught or suggested by the prior art.
> *In re Royka*, 490 F.2d 981, (CCPA 1974). "MPEP §2143.03.

Claims 3 and 13

Claim 3, which depends from claim 1, recites that the recommendation score is provided by an explicit program recommender. **Claim 13** recites similar aspects. The Office asserts that Herz et al. teaches this at column 12, lines 11-18. However, this section of Herz et al. relates to a customer profile, which is determined from a customer questionnaire or ballot filled out by a

customer. This section of Herz et al. is silent with respect to an explicit program recommender, let alone an explicit program recommender that provides a recommendation score for one or more available items. Accordingly, this rejection should be reversed.

Claims 5, 6, 9, 15, 16 and 19

Claims 5, 6, 9, 15, 16 and 19 depend from independent claims 1, 8, 11 and 18 and are allowable at least by virtue of their dependencies. Therefore, the rejection of claims 5, 6, 9, 15, 16 and 19 should be reversed.

CONCLUSION

In view of the foregoing, it is submitted that all pending claims distinguish patentably and non-obviously over the prior art of record, and reversal of the rejection of the claims is respectfully requested.

Respectfully submitted,

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VIII.   CLAIM APPENDIX

1.   (Previously presented)   A method for recommending items using a recommending device, comprising the steps of:

obtaining a list of one or more available items;

obtaining a recommendation score, R, for said one or more available items;

calculating, using a processor of the recommending device, an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered, wherein the number of times the item was offered is greater than one, and wherein the number of times the item was offered and the number of times the item was selected by the user are stored in a memory;

generating, using said processor, a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A; and

displaying said list on a display unit, wherein said items are displayed in order based on a value of said combined recommendation score, C.

2.   (Original)   The method of claim 1, wherein said list of one or more items are programs obtained from an electronic program guide.

3.   (Original)   The method of claim 1, wherein said recommendation score, R, is provided by an explicit program recommender.

4.   (Original)   The method of claim 1, wherein said recommendation score, R, is provided by an implicit program recommender.

5.   (Original)   The method of claim 1, wherein said recommendation score, R, is defined as a weighted average of individual ratings of program features.

6.   (Previously Presented)   The method of claim 1, further comprising the step of presenting said combined recommendation score, C, for each of said one or more items to a user.

7.   (Original)   The method of claim 1, wherein said adjustment to said recommendation score, R, does not exceed a predefined value.

8.   (Previously Presented)   A method for recommending items, comprising the steps of:

obtaining a list of one or more available items;

calculating, using a processor, a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered, wherein the number of times the item was offered is greater than one, and wherein the number of times the item was offered and the number of times the item was selected by the user are stored in a memory; and

displaying said list on a display unit, wherein said items are displayed in order based on a value of said recommendation score.

9.   (Original)   The method of claim 8, further comprising the step of presenting said combined recommendation score, C, for said program to a user.

10.   (Original)   The method of claim 8, wherein said list of one or more available items are programs obtained from an electronic program guide.

11.   (Previously presented)   A system for recommending items, comprising:

a memory for storing computer readable code; and

a processor operatively coupled to said memory, said processor configured to:

obtain a list of one or more available items;

obtain a recommendation score, R, for said one or more available items;

calculate an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one;

generate a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A; and

control a displaying of said list, wherein said items are displayed in order based on a value of said combined recommendation score, C.

12.   (Original)   The system of claim 11, wherein said list of one or more items are programs obtained from an electronic program guide.

13.   (Original)   The system of claim 11, wherein said recommendation score, R, is provided by an explicit program recommender.

14.   (Original)   The system of claim 11, wherein said recommendation score, R, is provided by an implicit program recommender.

15.   (Original)   The system of claim 11, wherein said recommendation score, R, is defined as a weighted average of individual ratings of program features.

16.   (Previously Presented)   The system of claim 11, wherein said processor is further configured to present said combined recommendation score, C, for each of said one or more items to a user.

17.   (Original)   The system of claim 11, wherein said adjustment to said recommendation score, R, does not exceed a predefined value.

18.   (Previously presented)   A system for recommending items, comprising:
a memory for storing computer readable code; and
a processor operatively coupled to said memory, said processor configured to:
        obtain a list of one or more available items;
        calculate a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one; and

control a displaying of said list, wherein said items are displayed in order based on a value of said recommendation score.

19. (Original) The system of claim 18, wherein said processor is further configured to present said combined recommendation score, C, for said program to a user.

20. (Original) The system of claim 18, wherein said list of one or more available items are programs obtained from an electronic program guide.

21. (Previously presented) An article of manufacture for recommending television items, comprising:
    a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:
        a step to obtain a list of one or more available items;
        a step to obtain a recommendation score, R, for said one or more available items;
        a step to calculate an adjustment, A, to said recommendation score, R, based on a consistency which is a ratio of an item being selected by a user relative to the number of times the item was offered wherein the number of times the item was offered is greater than one;
        a step to generate a combined recommendation score, C, based on said recommendation score, R, and said adjustment, A; and
        a step to display said list, wherein said items are displayed in order based on a value of said combined recommendation score, C.

22. (Previously presented) An article of manufacture for generating a recommendation score for an item, comprising:
    a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:
        a step to obtain a list of one or more available items;
        a step to calculate a recommendation score for said one or more items based on a consistency which is a ratio of an item being selected by a user relative to the number of

times the item was offered wherein the number of times the item was offered is greater than one; and

a step to display said list, wherein said items are displayed in order based on a value of said recommendation score.

IX.   EVIDENCE APPENDIX

None.

X.   RELATED PROCEEDINGS APPENDIX

None known to undersigned attorney/agent.